



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,095	01/22/2002	Jae Chang Jung	30205/37777	3616

4743 7590 08/21/2003

MARSHALL, GERSTEIN & BORUN LLP
6300 SEARS TOWER
233 S. WACKER DRIVE
CHICAGO, IL 60606

EXAMINER

ASHTON, ROSEMARY E

ART UNIT	PAPER NUMBER
----------	--------------

1752

DATE MAILED: 08/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/054,095

Applicant(s)

JUNG ET AL.

Examiner

Rosemary E. Ashton

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1752

DETAILED ACTION***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

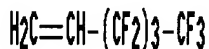
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Fritschel et al U.S. patent no. 4,624,988.

In example 4 Fritschel teaches the monomer perfluorobutyl ethylene and a polymer of the monomer with tetrafluoroethylene. Perfluorobutyl ethylene is 3,3,4,4,5,5,6,6,6-nonafluoro-1-hexene as shown below from the Chemical Abstract registry file..

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS on STN
RN 19430-93-4 REGISTRY
CN 1-Hexene, 3,3,4,4,5,5,6,6,6-nonafluoro- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (Perfluorobutyl)ethene
CN (Perfluorobutyl)ethylene
CN 1,1,2-Trihydroperfluoro-1-hexene
CN 1H,1H,2H-Nonafluoro-1-hexene
CN 3,3,4,4,5,5,6,6,6-Nonafluoro-1-hexene
CN 3,3,4,4,5,5,6,6,6-Nonafluorohexene
CN Zonyl PFBE



3. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Mohri et al U.S. patent no. 5,216,081.

Mohri teaches curable compositions comprising fluoro polymers. Monomers for the polymer are shown in lines 13-15 of col. 6 and below.

Art Unit: 1752



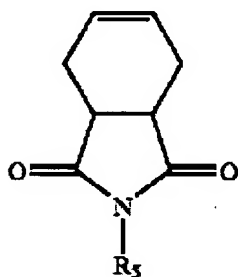
In Table 1 monomers defined as Rf: $\text{CH}_2=\text{CH}(\text{CF}_2)_p\text{CF}_3$, $p=1$ to 5 are used to form copolymers with ethylene, vinyl chloride and other monomers.

Allowable Subject Matter

4. Claims 5-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach a polymer or method of making a polymer having the fluoro monomers and the monomer having formula 3 and/or formula 4 below or a photoresist composition having a polymer of formula I.

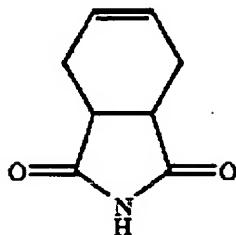
Chemical Formula 3



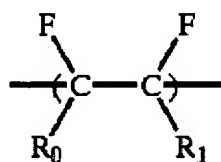
[0020] wherein, R_3 is COOR' ; and R' is an acid labile protecting group.

Art Unit: 1752

Chemical Formula 4

**Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aoi et al al U.S. patent application publication US 2002/0061464 A1 for application no. 09/961,281 filed September 25, 2001. Aoi teaches a fluorine containing polymer for a photoresist composition such as a polymer having a monomer of formula I shown below. The monomer differs from applicant's monomer in that it has two adjacent fluorine atoms. Applicant's monomer requires the substituents on the double bond are hydrogen atoms or halo-alkyl groups, not halogen atoms.



(I)

[0023] wherein R_0 and R_1 each represents a hydrogen atom, a fluorine atom, or an alkyl, perfluoroalkyl, cycloalkyl or aryl group, each of which may have a substituent;

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosemary E. Ashton whose telephone number is 703-308-2057. The examiner works a flexible work schedule and can normally be reached M-F between 10:00 am – 5:00 pm.

Art Unit: 1752

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached at 703-308-2303.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



ROSEMARY ASHTON
PRIMARY EXAMINER

Rosemary E. Ashton
Primary Examiner
Art Unit 1752

rea
August 15, 2003